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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/557,288

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Mario Tavazza

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EXAMINER

ZHENG, LI

ART UNIT

PAPER NUMBER

1638

MAIL DATE

DELIVERY MODE

03/16/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/557,288	Applicant(s) TAVAZZA ET AL.	
	Examiner LI ZHENG	Art Unit 1638	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 December 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 44-55, 58, 59, 61, 63-65 and 68 is/are pending in the application.
- 4a) Of the above claim(s) 44-54 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 55, 58, 59, 61, 63-65 and 68 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claims 44-55, 58-59, 61, 63-65 and 68 are pending.
2. Applicant's amendments to claims 59, 65 and 68 as well as submission of substitute specification filed on 12/22/08 are acknowledged.

Claims 44-54 are withdrawn for being drawn to non-elected inventions.

Claims 55, 58-59, 61, 63-65 and 68 are examined on the merits.

3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
4. The rejections and objections that are not recited in this Office Action are considered as being withdrawn.

Claim Rejections - 35 USC § 112

Scope of Enablement

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5. Claims 55, 58-59, 61, 63-65 and 68 remain rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for a method for the preparation of transgenic plant having long lasting resistance against geminiviruses by making silent mutations to truncated Rep gene from TYLCSV, does not reasonably provide enablement for making any mutations to truncated Rep gene from TYLCSV having 130 residues from N-terminal of the Rep protein, or any geminivirus-derived sequence encoding an amino acid sequence able to confer resistance against geminiviruses. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to practice the invention commensurate in scope with these claims, for the reasons of record stated in the Office action mailed September 22, 2008. Applicants traverse in the paper filed December 22, 2008. Applicants' arguments have been fully considered but were not found persuasive.

Applicants argue that the specification describes in detail that a unifying feature of the invention is the introduction of silent point mutations derived by geminiviruses and distributed in such a way that the modified gene becomes an ineffective target of the gene silencing induced by the virus (response, page 13, 1st paragraph). Applicants further argue that the present application is not directed to a generic site-specific mutagenesis on geminivirus (response, the paragraph bridging pages 13-14).

The Office contends that the instant claims are not so limited to the silent point mutation and thus encompass any point mutations.

Applicants further argue that the method can be used to all Begomovirus that can infect tomato because it is well known that proteins derived from geminivirus AL1/C1/AC1 gene are able to interfere with the replication but the resistance is not long lasting (response, page 14, 2nd paragraph).

However, the instant claims are not so limited to dominant negative version of AL1/C1/AC1 genes, but rather encompass any geminivirus-derived sequence encoding an amino acid sequence able to confer resistance against geminiviruses regardless of its mode of action.

Applicants further argue that the specification describe in detail that the gene sequence belonging to the genome of the geminiviruses can be the sequence C1, C2, C3, C4, V1, V2, BC1 and BV1 (response, page 15, 2nd paragraph).

However, C2, C3, C4, V1, V2, BC1 and BV1 can not be enabled simply because they belong to the genome of the geminiviruses. The specification does not provide guidance on how those genes can be used to generate resistant plant; whether the virus induced gene silencing affect the resistance; and whether codon modification of other unexemplified genes would result in use of rare codon for host plant which could cause problems with tRNA recruitment during translation and then lead to lower accumulation of the encoded protein.

Summary

No claim is allowed.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Li Zheng whose telephone number is 571-272-8031. The examiner can normally be reached on Monday through Friday 9:00 AM - 5:30 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Anne Marie Grunberg can be reached on 571-272-0975. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Elizabeth F. McElwain/
Primary Examiner, Art Unit 1638